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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/662,340 | 09/16/2003 | Junji Kobayashi | H64-154706M/MNN | 9314 |
| 21254 | 7590 | 09/22/2004 | EXAMINER | |
| MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817 | | | DOTE, JANIS L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1756 | |

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/662,340 | Applicant(s) KOBAYASHI ET AL. | |
| | Examiner Janis L. Dote | Art Unit 1756 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/16/03</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The information disclosure statement filed on Sep. 16, 2003 has been considered by the examiner. Applicants' statements of relevance of the contents of Japanese patents 52-3304, 52-3305, and 57-5274, listed on the form PTO-1449 filed on Sep. 16, 2003, are found at page 5, line 20, to page 6, line 3, of the instant specification.

2. The disclosure is objected to because of the following informalities:

(1) In example 1, the sum of the amounts of the components in the toner, i.e., 85 wt% for binder resin, 1 wt% for charge control agent, 10 wt% for carbon black, 4.5 wt% for polyethylene wax, and 0.75 wt% for paraffin wax, is 101 wt%. It is not clear how the sum of weight percentages based on the total weight of the toner can be other than 100 wt%.

(2) The use of trademarks, e.g., Bontron S-34 [sic: BONTRON S-34} at page 29, line 18, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be

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respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

In claim 3, the recited crystallinity of "80% or more but is 93% or less" (emphasis added) lacks antecedent basis in the specification. See page 12, lines 2-3, of the specification, which discloses that the wax has a crystallinity of "more than 85% but less than 93%" (emphasis added). The range recited in claim 3 is broader than the range disclosed at page 12, because it includes values of 80% to 85% and 93%, which are outside the disclosed range of "more than 85% but less than 93%."

4. In view of the disclosure in the instant specification, the examiner has interpreted the phrase "Wn (wt%) is a compound rate occupied in an overall wax" as referring to the weight percentage of a wax based on the total amount of wax used in the toner. See page 29, lines 20-22, of the specification, which

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discloses that the wax compound weight ratio of the polyethylene wax and the paraffin wax is 85 wt% and 15 wt%, respectively, based on 100 wt% of wax.

If applicants do not agree with the examiner's interpretation of the phrase "Wn (wt%) is a compound rate occupied in the overall wax," applicants should clearly state so, and indicate where there is antecedent basis for their definition in the originally filed specification.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 5 are indefinite in the phrase "one type wax or K type [sic: claim 5 types] (K is an integer in excess of 1) waxes" (emphasis added) because it is not clear what is meant by the term "type." It is not clear whether the term "type" refers to a wax or to some material that has the characteristics or

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properties of a wax. It is also not clear how different one wax sample must be from another to be considered a different "type" of wax.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35

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U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f), or (g) prior art under 35 U.S.C. 103(a).

10. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by US 6,447,968 B1 (Ohno'968).

Ohno'968 discloses an image forming apparatus comprising a photosensitive drum 1, which carries an electrostatic latent image, and a developing unit 4-1, comprising a magnetic toner, wherein the developing unit develops the electrostatic latent image with the magnetic toner. Magnetic toner production example 1 at cols. 33-34; Fig. 1; and col. 35, line 55, to col. 36, line 11.

Ohno'968 does not exemplify the particular toner recited in the instant claims. However, the instant claim does not positively recite that the apparatus comprises the particular toner. Instant claim 5 merely recites "a developing unit for developing the electrostatic latent image by using an electrostatic charge image developing toner." The particular toner recited in the instant claim does not distinguish the structural elements in the instantly claimed apparatus from those in the apparatus in Ohno'968. A material (i.e., the toner) worked upon by the apparatus does not limit the apparatus claims. "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the

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claims." See MPEP 2115. It is well settled, as stated in Ex parte Masham, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Int. 1987) that "a recitation with respect to the material intended to be worked upon by a claimed apparatus does not impose any structural limitations upon the claimed apparatus which differentiates it from the prior art apparatus satisfying the structural limitations of that claimed." Accordingly, the particular toner recited in the instant claim does not distinguish the instantly claimed apparatus from the apparatus disclosed by Ohno'968.

11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,364,722 (Tanikawa).

Tanikawa discloses a toner for developing electrostatic images comprising a styrene-n-butylacrylate binder resin (i.e., fixing resin) and 4 parts by weight of hydrocarbon wax A2. See preparation of binder resins synthesis example 7 at cols. 26-27; and Example 6 at col. 28. Hydrocarbon wax A2 exhibits an onset temperature of a heat absorption peak in a differential scanning calorimeter (DSC) curve of 64°C and a maximum peak of absorbed heat (i.e., melting point) at 81°C. See Table 7-1 at col. 25, wax A2. Wax A2 has a crystallinity of 89%. See Table 8 at col. 26, wax A2. The maximum peak of absorbed heat and

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crystallinity meet the melting point range and crystallinity range recited in instant claims 2 and 3, respectively. The Tanikawa toner of example 6 satisfies the formulas (1) and (2) recited in instant claim 1. Because the hydrocarbon wax A2 is the only wax present in the toner, the value of T in formula (1) is 64 (i.e., $64^{\circ}\text{C} \times 100 \text{ wt\%/}100$). The T value of 64 is greater than 56, so the inequality recited in formula (2) is satisfied.

12. Claim 4 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tanikawa.

Tanikawa discloses a toner as described in paragraph 11 above, which is incorporated herein by reference. As discussed in paragraph 11, the toner disclosed by Tanikawa comprises a styrene-n-butylacrylate binder resin. The binder resin meets the fixing resin composition limitation "at least a vinyl copolymer" recited in instant claim 4.

Instant claim 4 is written in product-by-process format. Claim 4 recites that the vinyl copolymer "is polymerized in existence of the wax." Tanikawa does not exemplify making a toner as recited in instant claim 4. Rather, the toner in example 6 of Tanikawa is obtained by melt-kneading a mixture comprising the binder resin and hydrocarbon wax A2 in an

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extruder, cooling the melted mixture, pulverizing the cooled mixture, and classifying the pulverized composition to obtain toner particles. See example 6. However, as discussed above, the Tanikawa toner meets the compositional limitations recited in instant claim 4. Accordingly, the Tanikawa toner appears to be the same or substantially the same as the toner recited in instant claim 4. The burden is on applicants to prove otherwise. In re Marosi, 218 USPQ 289 (Fed. Cir. 1983); In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985); MPEP 2113.

13. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by US 2001/0033983 A1 (Ohno'983).

Ohno'983 discloses a toner for developing electrostatic images comprising a styrene-2-ethylhexylacrylate binder resin (i.e., fixing resin) and 10 parts by weight of wax C. Paragraphs 0185-0188, 0192, and 0193; and Table 3 at page 17, toner (D). Wax C exhibits an onset temperature of a heat absorption peak in a differential scanning calorimeter (DSC) curve of 64°C and a maximum peak of absorbed heat (i.e., melting point) at 97°C. See Table 2 at page 15, wax C. The maximum peak of absorbed heat meets the melting point range of 50 to 120°C recited in instant claim 2. Ohno'983 toner (D) satisfies the formulas (1) and (2) recited in instant claim 1. Because wax C

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is the only wax present in the toner, the value of T in formula (1) is 64 (i.e., $64^{\circ}\text{C} \times 100 \text{ wt\%/100}$). The T value of 64 is greater than 56, so the inequality recited in formula (2) is satisfied. The styrene-2-ethylhexylacrylate binder resin meets the fixing resin compositional limitation "at least a vinyl copolymer" recited in instant claim 4. In addition, the styrene-2-ethylhexylacrylate binder resin is obtained by suspension polymerizing the monomers styrene and 2-ethylhexylacrylate in the presence of wax C, which meets the product-by-process limitation recited in instant claim 4.

Ohno'983 further discloses that toner (D) may be used in an image forming apparatus shown in Fig. 1. Paragraph 0201. The apparatus comprises a photosensitive member 1, which carries the electrostatic latent image, and a developing unit 4-4 that contains toner (D). Paragraph 0202. Thus, the apparatus meets the apparatus components recited in instant claim 5.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to

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Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Sep. 16, 2004

Janis L. Dute
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